

USSN 09/964,472
Art Unit: 2812

Remarks

As noted above there appears to be an ambiguity over whether this action was intended to be final since the official office action summary states that it is non-final, yet the conclusion in the body of the office action states that it is final.

The stated reason for the finality in the office action is the "Applicant's amendment necessitated the new ground(s) of rejection". Having regard to the fact that the only amendment made in the previous response was the cancellation of claim 19, the correction of a discrepancy in former claim 11, and the addition of a new claim 20, which is dependent on unchanged claim 1, it is not understood how such amendment can possibly necessitate the citation of a previously uncited reference that the applicant has not had the opportunity to consider under non final conditions. On contrary, the previous action only required an election of species, which the applicant complied with, and suggested that the Examiner's only other objection related to claim 19, which was cancelled.

MPEP 706.07(a) states in part that:

"A second or any subsequent action on the merits in any application or patent involved in reexamination proceedings should not be made final if it includes a rejection, on newly cited art, other than information submitted in an information disclosure statement filed under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p), of any claim not amended by the applicant or patent owner in spite of the fact that other claims ..." (emphasis added)

The Examiner's rejection is based on newly cited art, and claim 1 was unchanged. Therefore, the any finality in this action is clearly improper, and to the extent that the office action was intended to be final, the applicants respectfully request that such finality be withdrawn. The Examiner had ample opportunity to cite the prior art in the previous action, and this would have given the applicants an opportunity to review it under non final conditions, which the applicant is fully entitled to do under USPTO policy. If the Examiner persists in considering this action final, he is respectfully requested to state for the record how the applicant's amendment (no amendment was made to claim 1) could possibly have necessitated the new ground of rejection on newly cited prior art.

USSN 09/964,472
Art Unit: 2812

Claim 1 has been amended to capture more fully the essence of this invention. As apparent from the specification, the underlying insight in this invention is the fact that starting from a predefined set of only sixteen different and specific mask steps, it is possible to fabricate a wide variety of different types of integrated circuit while retaining the same numerical sequence of steps. One of a series of different sequences is employed, as illustrated in the drawings, depending on the specific type of integrated circuit to be made. This finding is of considerable commercial importance because each different mask step is expensive, and the ability to make a large number of different types of device from a limited predefined set of only sixteen mask steps in the same order is of great practical value.

In a sense it is also possible to think of the invention as a novel kind of business method applied to a technical field. After forming a predefined set of steps, you identify a device to be made, select the appropriate steps from the predefined set, and carry out the selected sequence in numerical order based on the particular device to be made and using a predetermined sequence within the master set of only sixteen steps. This has not been done before, and is not rendered obvious over the cited art.

The applicants have also changed the format of claim 1 to avoid the sequencing problems with the mask steps. The claim now specifies that each mask step involves the application of a separate mask and the performing of an associated activity, which is defined with reference to the specific mask steps. The way the claim is now worded, it is not necessary to explicitly state that the mask is removed because the claims just states in each case that a mask is used to perform the defined activity. Using a mask would typically involve applying it and then stripping it.

With reference to the formation of the vias, it has been expressly stated, what was believed to be inherent in the unamended claim that the mask is used to form vias in underlying material.

With regard to the introduction to claim 1, this is now believed to be clear in the context of the amended claim. It doesn't really matter whether the type of device in question is old or new. What is important is that a predefined set of mask steps is identified, a device to be made is selected, and then the appropriate sequence from the predefined set is implemented to make the selected device.

USSN 09/964,472
Art Unit: 2812

Williams et al. clearly do not teach the method as now defined of predefining a set of only sixteen mask steps and then selecting from among them. Williams relates to the manufacture of similar devices, but does not recognize that such a wide variety of devices can be made using only the defined sixteen mask steps as set forth in claim 1, and selecting a particular sequences appropriate to the device to be made from the predefined set.

Williams' mask steps are set out in the table in columns 3 and 4. Steps 59, 62, 67, 69, 73, 75, and 77 correspond to mask steps 10 to 16. However, before that Williams includes a number of additional mask steps and omits some, such as, for example, mask step 9, the p-top mask. Williams does not appreciate that from a simple sequence of only sixteen predefined mask steps as specifically defined in claim 1, and used in the sequence set forth, it is possible to make all the various BCD devices disclosed in the specification. Williams therefore neither anticipates nor renders obvious the invention as now claimed, particularly when viewed as a business method wherein a predefined set of mask steps is formed, and then a selection made as more fully defined in the amended claim.

Moreover, the Examiner has not given any basis for rejecting claim 20. The specific sub-steps recited in claim 20 are neither disclosed nor suggested in Williams.

It is believed that this application is now in condition for allowance. Reconsideration and allowance are respectfully requested.

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